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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/035,544	12/28/2001	Randall Rex Calvert	501059.01	4703

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EXAMINER

LEWIS, RALPH A

ART UNIT	PAPER NUMBER
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3732

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DATE MAILED: 03/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/035,544

Applicant(s)

CALVERT, RANDALL REX

Examiner

Ralph A. Lewis

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-41 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 37-41 is/are allowed.
- 6) ☒ Claim(s) 1-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Rejection based on New Matter

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-36 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The amendment to independent claims 1, 14, 25 and 32 that the fully polymerized plug (i.e. optic fiber) "seals the apical portion of the root canal when implanted" has no support in the originally filed papers. Page 10, lines 15-18 indicate that the distal end 2 of the plug is "positioned adjacent to an apical foramen 29" and that the "plug 10 properly extends to the apical foramen 29," but nowhere does it state that the plug 10 "seals" the apical foramen. In fact, applicant's Figure 1 illustrates a pointed tip 2 which would clearly fail to "seal" the cylindrically formed apical foramen 29 of the Figure 2 tooth and Figure 9 actually illustrates a gap between the plug and the apical foramen.

Rejections based on Prior Art

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 4, 5, 14, 15, 17 and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Vari (5,503,559).

Vari discloses an optic fiber 94 (Figure 20, column 9, lines 58-62) that is resilient and sized for extending to the apex (apical portion) of a root canal. Optical fibers are inherently fully polymerized (note this inherence is presumed with applicant's own fiber optics as applicant's specification provides no explicit support for the "fully polymerized" limitation). The Vari optic fiber "fills the root canal of the tooth" and extends to the apical portion of the root canal and meets all the structural limitations of applicant's presently claimed "plug." In regard to claim 14, note the elongated support coupled at 94 (Figure 20).

In response to the present rejection applicant argues that his strand of fiber optic is patentable over the Vari strand of fiber optic because "Vari does not disclose that the apparatus seals the apical tip of the root canal" (response page 10). It is a well settled issue of patent law that a known device does not become patentable merely because an applicant desires a new and different **use** for that prior art device. Applicant points

no physical distinction between his claimed optic fiber and the optic fiber disclosed by Vari, but merely argues that the optic fibers are used differently.

Claims 1, 2, 4, 14, 15, 17 and 22-24 are rejected under 35 U.S.C. 102(b) as being anticipated by Weissman (5,326,263).

Weissman discloses a plug 11 made of a flexible optically transmissive material for insertion into a prepared root canal. An elongated fiber optic support is coupled to the plug portion. In regard to the intended use limitation that the plug seal the apical portion of the root canal when implanted, it is noted that the Weissman optical plug is capable of such a use. Applicant's own specification admits at page 10, lines 8-11, that root canals when prepared are subject to numerous mechanical shaping operations including reaming or filing. The particular opening size through the apical foramen is dependent on how much it is reamed and could be reamed to a size to accommodate the Weissman plug in a sealing manner. Consequently the Weissman plug is physically capable of meeting the functional limitation of how applicant intends for the claimed device to be used.

Applicant's arguments that his claimed device is used differently than the Weissman device, fail to provide for any objectively ascertainable structural distinctions between the claimed device and the prior art device.

Claims 1, 4-7, 12, 14, 17, 18, 20 and 22-24 are rejected under 35 U.S.C. 102(b) as being anticipated by Billet et al (WO 98/11842)(for purposes of explaining this

rejection US 6,183,253 B1 is relied upon as an English translation of the earlier published PCT application).

Billet et al discloses an elongated body comprised of a biologically compatible resilient optically transmissive material (e.g. glass fibers, column 3, line 30) that is fully polymerized (column 3, line 12). It is noted that the Billet et al body also includes materials other than the claimed fully polymerized material, however, applicant uses the open term "comprising" to indicate that the "body" can include materials other than materials that are fully polymerized. In regard to the "seal the apical portion of the root canal" limitation attention is directed to Figure 2 where the body is inserted down into the apical foramen sealing it.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3, 5, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weissman (5,326,263).

The use of translucent materials, conventional materials (re claim 5, note column 7, lines 18-29) and adhesives with conventional viscosities would have been obvious to

one of ordinary skill in the art as a matter of routine practice in carrying out the invention described by Weissman.

Claims 6-8 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weissman (5,326,263) in view of Billet et al (WO 98/11842) (for purposes of this rejection US 6,183,253 B1 is relied upon as an English translation of the earlier published PCT application).

Billet et al teach that it is often desirable to include radiopaque materials in fiber optic root canal fillings so that the fillings can be detected by x-ray. To have included conventional fiber optic materials in the fiber optic plug of Weissman so that it could be view by x-ray as taught by Billet et al would have been obvious to one of ordinary skill in the art.

Claims 2, 3, 8, 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Billet et al (WO 98/11842) (for purposes of this rejection US 6,183,253 B1 is relied upon as an English translation of the earlier published PCT application).

In regard to claims 2, 3, 15, and 16, Billet et al indicate that the disclosed plug 8 is comprised of a material which is in the form of fibers that are permeable to light (column 3, line 32) but does not explicitly state that the fibers are transparent and/or translucent. One of ordinary skill in the art would readily appreciate and find obvious the use of transparent and/or translucent fibers as the "permeable to light" fibers of Billet

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et al. In regard to claim 8, the selection of a conventional radiopaque material for the radiopaque material disclosed by Billet et al (column 3, line 18, would have been obvious to one of ordinary skill in the art.

Claims 1-8, 12, 14-18, 20, 22, 23, 25, 27-32 and 34-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martelli et al (EP 0 938 875) in view of Billet et al (WO 98/11842) (for purposes of this rejection US 6,183,253 B1 is relied upon as an English translation of the earlier published PCT application).

Martelli et al disclose a method for obturating a root canal wherein an adhesive is applied a root canal passage (column 3, lines 49-50) an optically transmissive fully polymerized glass fiber plug is then inserted into the root canal and the plug is connected with a light source to conduct light to the root canal polymerizing the adhesive (note column 3, lines 51-54). Martelli et al do not discuss the treatment of the canal to the depth of the apical foramen and the Figures do not appear to illustrate the method of root canal obturation extending to such a depth. Billet et al, however, teach that it is known to clean the root canal to the tip of the apical foramen and then fill it in a sealing manner with a fiber optic plug. To have extended the Martelli fiber optic plug to a length such that it extended to and sealed the apical foramen would have been obvious to one of ordinary skill in the art as taught by Billet et al.

Allowable Subject Matter

Claims 37-41 are allowed.

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Claims 9-11, 13, 19, 21, 26 and 33, would be allowable if rewritten in independent form and written to overcome the new matter rejection above.

Any inquiry concerning this communication should be directed to **Ralph Lewis** at telephone number **(703) 308-0770**. Fax (703) 872-9306. The examiner works a compressed work schedule and is unavailable every other Friday. The examiner's supervisor, Kevin Shaver, can be reached at (703) 308-2582.

R.Lewis
March 5, 2004



Ralph A. Lewis
Primary Examiner
AU 3732